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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,243	01/16/2002	Titus Lo	12177/13802	5223

23838 7590 09/03/2004  
KENYON & KENYON  
1500 K STREET, N.W., SUITE 700  
WASHINGTON, DC 20005

EXAMINER

NGUYEN, SIMON

ART UNIT PAPER NUMBER

2685

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/046,243	LO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SIMON D NGUYEN	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 9-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 9-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,377,783. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the application are broader than the ones in the patent. In particular, the claims lack the step of receiving the N independent beams and provides M output beams where  $1 < \text{or} = M < N$ .

***Claim Objections***

3. Claim 13 is objected to because of the following informalities: the term "the method of claim 10" should be changed to ...the method of claim 9....

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Newman et al. (5,907,816).

Regarding claim 9, Newman discloses an array antenna for a base station (figs.7-8), comprising: capturing (receiving) wireless signals on a plurality of antennas (column 4 lines 42-62); forming a plurality of beams from outputs of the antennas (column 10 line 46); selecting a subset of beams (column 5 lines 59-67, column 6 lines 57-58); outputting, from the receivers, processed signals corresponding to the beams; and extracting a message (information) from the processed signal (column 7 lines 4-24).

Regarding claims 10-13, Newman further discloses the steps of assigning weights to the processed signals (column 13 lines 35-39); demodulating signals (column 7 lines 18-19); the strongest beam is processed by a primary receiver (#18) (column 5 lines 59-67, fig.1) and other beams of the subset are processed by auxiliary receiver (#18a of fig.1)(column 6 lines 53-55).

Regarding claim 14, this claim is rejected for the same reason as set forth in claims 9, 12-13 of Newman.

Regarding claim 17, this claim is rejected for the same reason as set forth in claim 14 of Newman.

Regarding claims 15-16, Newman further discloses a digital processor for selecting, weighting, and demodulating signal (column 7 lines 25-27).

Regarding claims 18-19, these claims are rejected for the same reason as set forth in claims 12-13.

Regarding claim 20-22, these claims are rejected for the same reason as set forth in claim 15.

6. Claims 9-11, 17, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Keskitalo et al. (6,073,032).

Regarding claims 9, 17, Keskitalo disclose a method for optimally combining communication beams (figs.7-8), comprising: capturing (receiving) wireless signals on a plurality of antennas (fig.7, column 14 lines 31-45); forming a plurality of beams from outputs of the antennas (column 13 line 13, column 14 lines 41, 64); selecting a subset of beams (best signal components from the

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inputs of the RX switch); outputting, from the receivers, processed signals corresponding to the beams (figs. 7-8, column 15 lines 12-67, column 16 lines 8-17); and extracting a message (information) from the processed signal (column 16 lines 4-5).

Regarding claim 10, Keskitalo further discloses the steps of assigning weights to the processed signals, combining the weighted signals and generating an output signal (figs. 6, 8, column 5 lines 55 to column 6 line 18, column 11 lines 20-64, column 12 lines 21-37, column 13 lines 20-39).

Regarding claims 11, 21, Keskitalo further discloses demodulating the outputs signal to obtain the message (information) (column 16 lines 1-17).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayakawa et al. (6,064,338) discloses an array antenna system of wireless base station comprising: receiving wireless signals on a plurality of antennas (#2), forming beams (#5), selecting (#32) best signals for processing by receivers (Rake receivers); extracting a message (data) from outputted signals of receivers (figs.3-6); Molnar et al. (6,694,154) discloses method and apparatus for performing beam searching in a base station (abstract, figs. 5-6, 8) comprising: capturing signals on a plurality of antenna, forming beams; selecting the best signals and extracting a message from outputted signals of receivers (figs 5-6, 8, column 9 line 20 to column 10 line 35, column 11 line 40 to column 12 line 38); Searle (6,397,082) discloses signals are

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received by a plurality of antennas (#40 of fig.2a), a beamformer (#44) for forming beams, a switch matrix (#58) for selecting beams with best signals for use in transceiver (figs.2a-b, column 3 line 33 to column 4 line 55); Chiba et al. (t,396,256) discloses an antenna array for receiving and processing signals (abstract, fig.1), comprising; capturing signal (R1---Rm), forming beams (#10), selecting beam (#11), processing beam and combining (#20, 21), and outputting information (column 6 line 56 to column 10 line 25) .

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

August 24, 2004

**SIMON NGUYEN**  
**PATENT EXAMINER**

